

FIG. 1

Melan-A Class I HLA-A2 Epitopes

MPREDAHF IYGYPKKGHGHSYTTAEAAAGIGILT VILGVLLLLIGCWYCR

RRNGYRALMDKSLHVGTQCALTRRCPQEGFDHRDSKVS LQEKNCPEPVVP

NAPPAYEKL SAEQSPPPYSP

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FIG. 2

MNGDDAFARRPTVGAQIP₁PEKIQKAFDDIAKYFSKEEWEKM

KASEKIF₂YVYMKRKY₃EAMTKLGFKATLPPFMCNKRAEDFQ

GNDLDNDPNRG₄NQVERPQMT₅FGRLQGISPKIMPKKPAEEG

NDSEEVPEASGPQNDGKELCPPGKPTTSEKIH₆ERSGPKRG

EHAWTHRLRERKQ₇LV₈IYEEISDP₉EE₁₀DE

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FIG. 3

MQAEGRGTTGG STGDADGPGG PGIPDGPGGN AGGPGEAGAT

GGRGPRGAGA ARASGPGGGA PRGPHGGAAS GLNGCCRCGA

RGPEs [RLLEFYLAM] PFATPMEAEIARRSLAQDAPPLPVP

[GVLLKEFTVSGN] [ILTIRLTAA] DHR

[QLQLSISSCLQ] [QLSLLMWIT] [QCFILPV] [FLAQ] [PPSGQRR]

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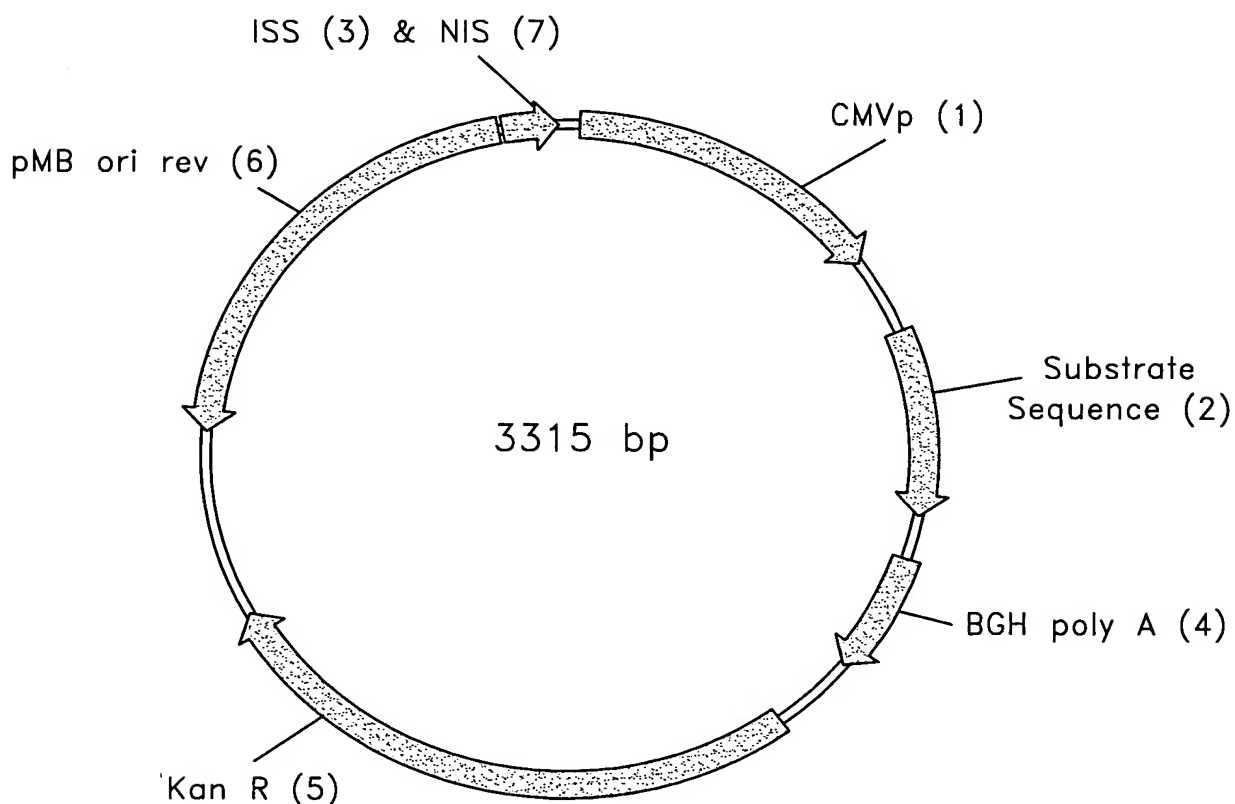


Figure Legend:

Code in Figure	Genetic Element	Region
1. CMVp	Cytomeglovirus Enhancer/Promoter	63-637
2. Substrate Sequence	Substrate Sequence Containing Epitope	696-983
3. ISS	Immunostimulatory Sequence	3220-3226
4. BGH poly A	Bovine Growth Hormone Polyadenylation Signal	1028-1045
5. Kan R	Kanamycin Resistance Gene	1431-2225
6. pMB ori rev	Bacterial pMB Origin of Replication	3165-2492
7. NIS	Nuclear Import Sequence from Simian Virus 40-72bp repeat	3227-3304

FIG. 4

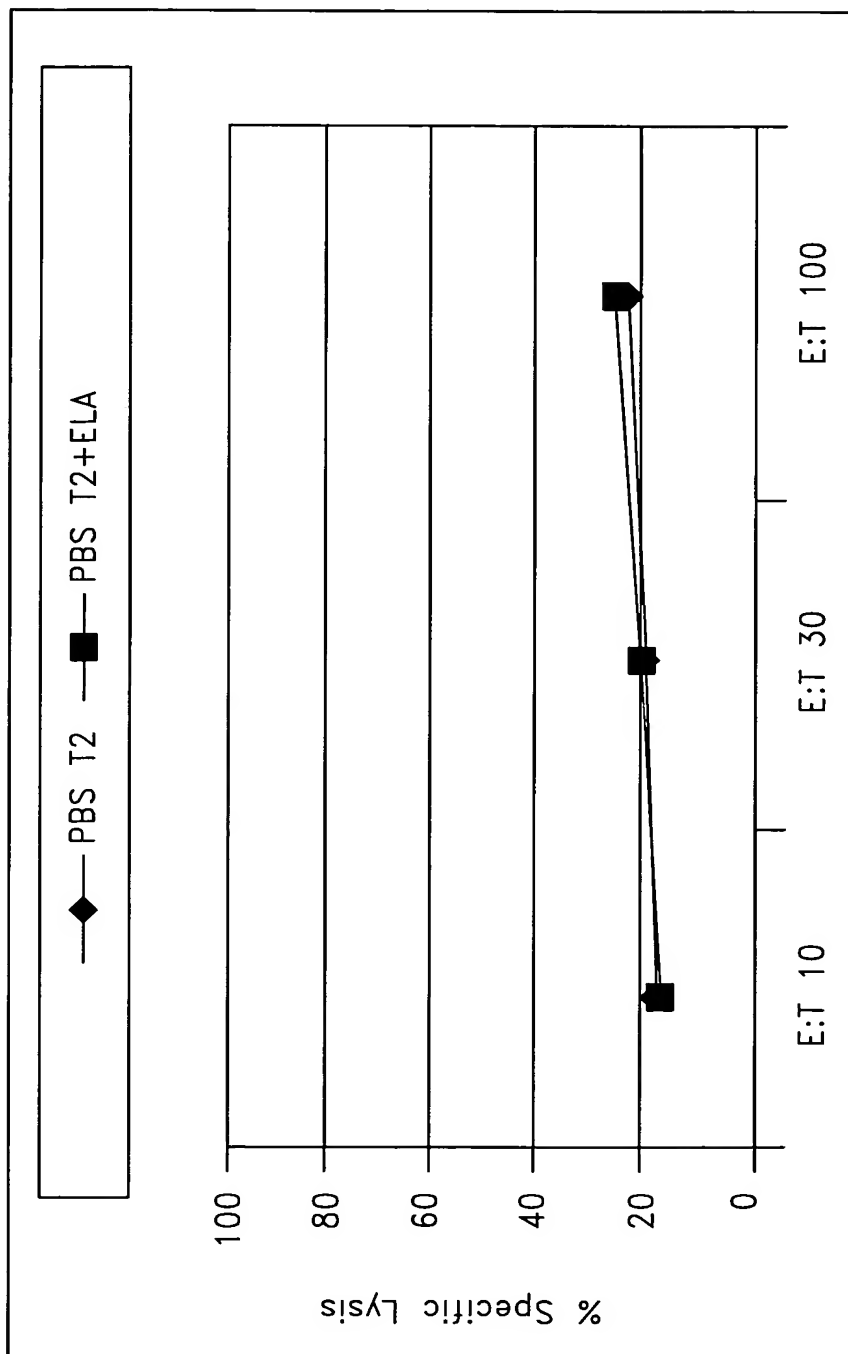


FIG. 5

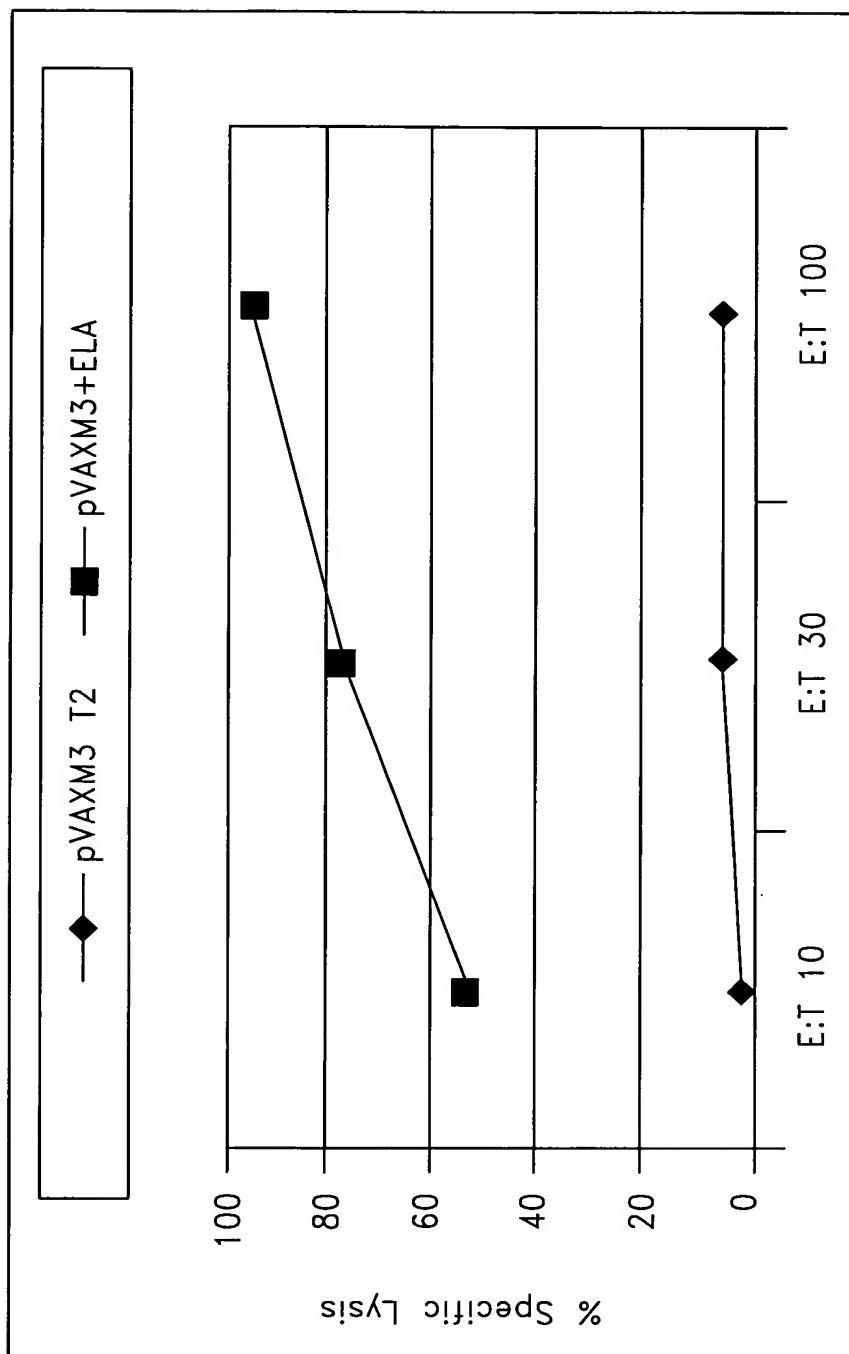


FIG. 6

FIG. 7

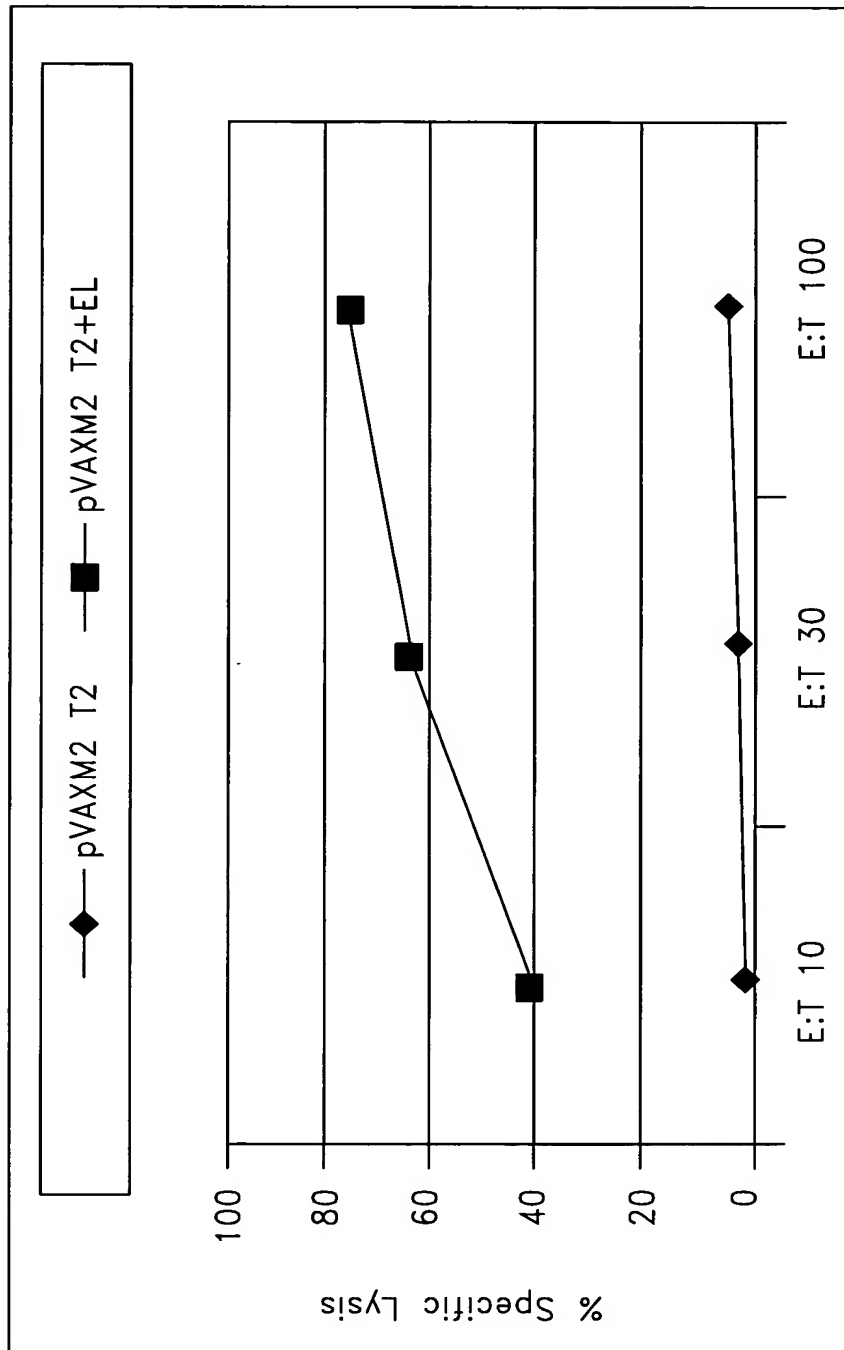
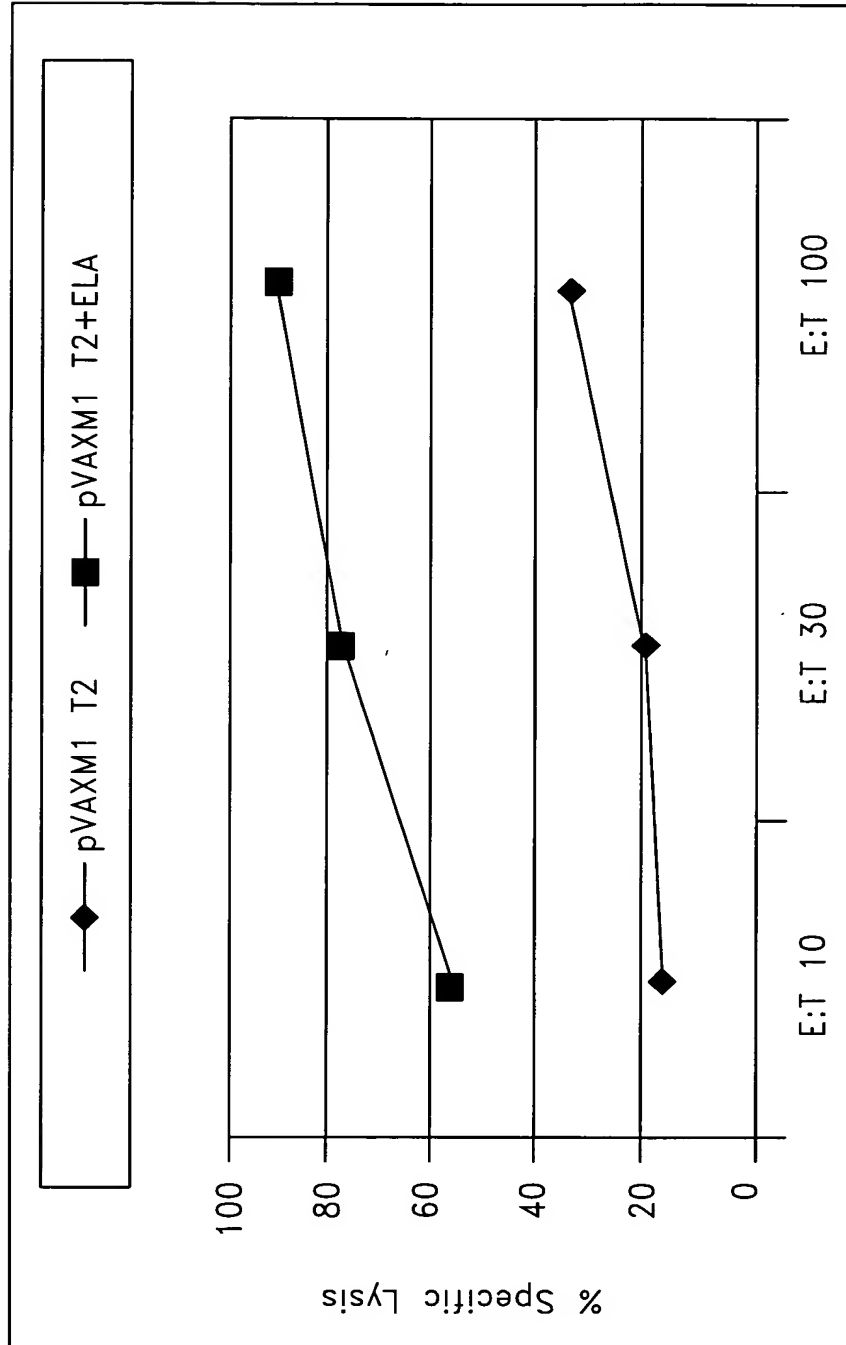


FIG. 8



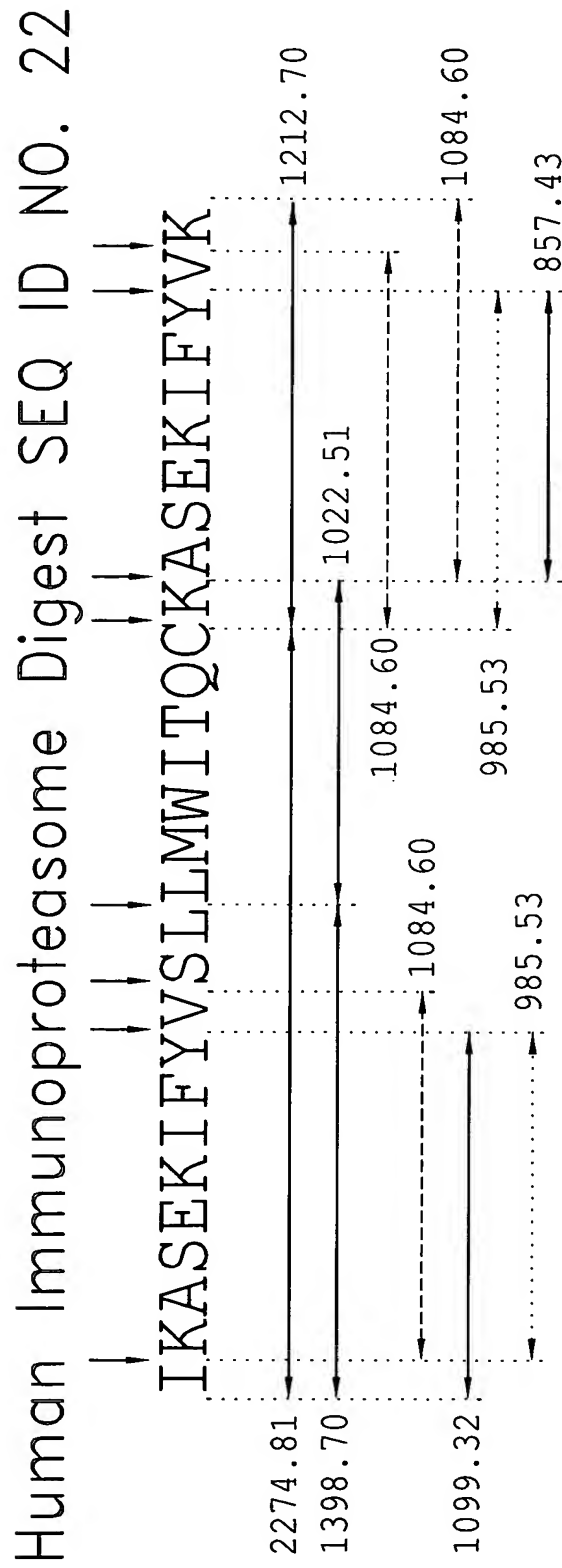
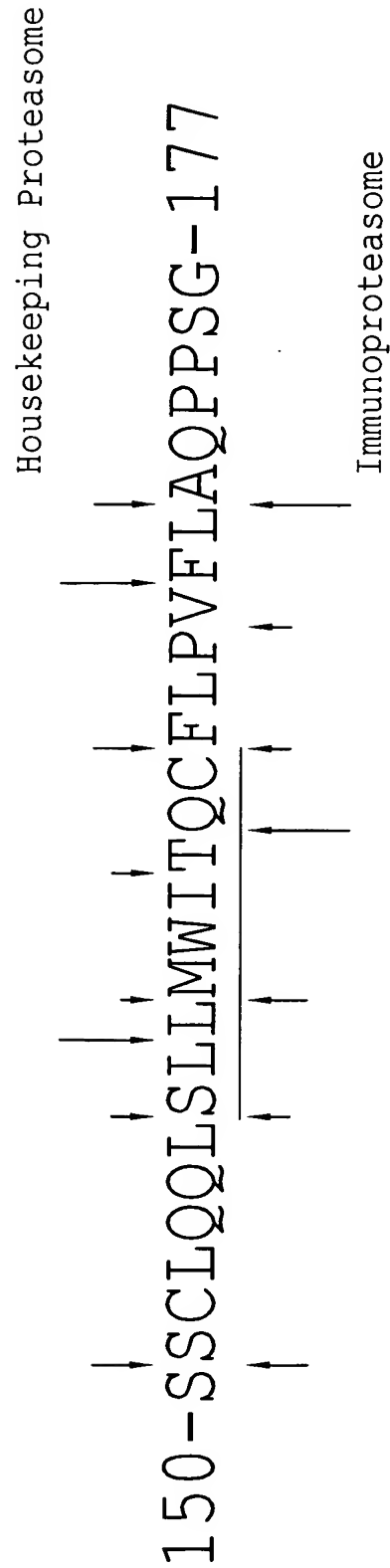


FIG. 10

NY-ESO-1 150-177



Cleavage sites in the NY-ESO-1 150-177 substrate upon digestion with 20S housekeeping proteasome (upper arrows) and immunoproteasome (lower arrows). The size of each arrow indicates the efficiency of cleavage as determined by pool sequencing analysis. The epitope NY-ESO-1 157-165 (SEQ ID NO. 12) is underlined.

FIG. 11A

Human Immunoproteasome Digest of SEQ ID NO. 31

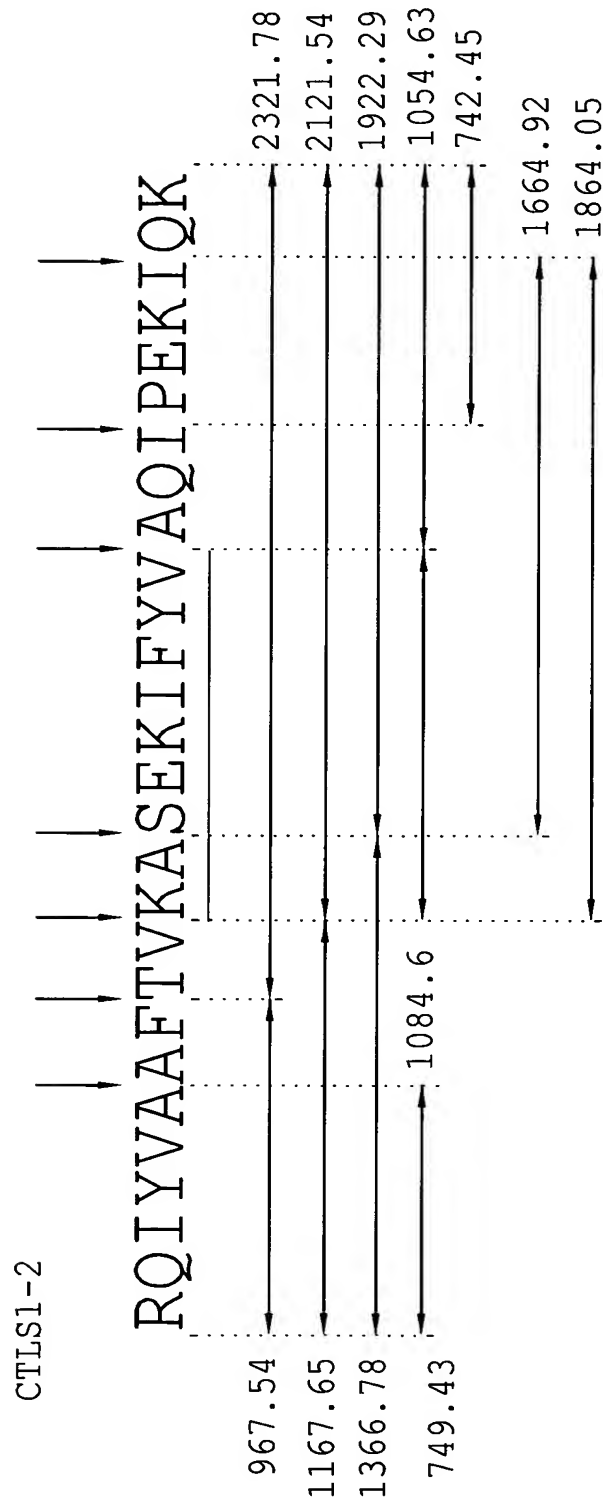
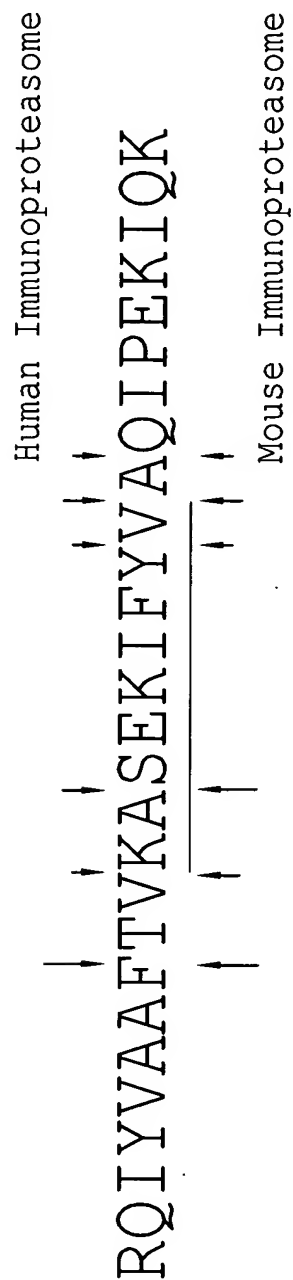


FIG. 11B



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FIG. 12

SSX2 31-68

